



# 2016 Major Automated Information System Annual Report



## Base Information Transport Infrastructure Wired (BITI Wired)

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MAIS Programs .....	3
Program Information .....	4
Responsible Office .....	4
References .....	4
Program Description .....	5
Business Case .....	6
Program Status .....	7
Schedule .....	8
Performance .....	9
Cost .....	11

## Common Acronyms and Abbreviations for MAIS Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ADM - Acquisition Decision Memorandum  
AoA - Analysis of Alternatives  
ATO - Authority To Operate  
APB - Acquisition Program Baseline  
BY - Base Year  
CAE - Component Acquisition Executive  
CDD - Capability Development Document  
CPD - Capability Production Document  
DAE - Defense Acquisition Executive  
DoD - Department of Defense  
DoDAF - DoD Architecture Framework  
FD - Full Deployment  
FDD - Full Deployment Decision  
FY - Fiscal Year  
IA - Information Assurance  
IATO - Interim Authority to Operate  
ICD - Initial Capability Document  
IEA - Information Enterprise Architecture  
IOC - Initial Operational Capability  
IP - Internet Protocol  
IT - Information Technology  
KPP - Key Performance Parameter  
\$M - Millions of Dollars  
MAIS - Major Automated Information System  
MAIS OE - MAIS Original Estimate  
MAR – MAIS Annual Report  
MDA - Milestone Decision Authority  
MDD - Materiel Development Decision  
MILCON - Military Construction  
MS - Milestone  
N/A - Not Applicable  
O&S - Operating and Support  
OSD - Office of the Secretary of Defense  
PB - President's Budget  
RDT&E - Research, Development, Test, and Evaluation  
SAE - Service Acquisition Executive  
TBD - To Be Determined  
TY - Then Year  
U.S.C- United States Code  
USD(AT&L) - Under Secretary of Defense for Acquisition, Technology, & Logistics

## Program Information

**Program Name**

Base Information Transport Infrastructure Wired (BITI Wired)

**DoD Component**

Air Force

## Responsible Office

**Program Manager**

Lt Col Bradley Panton  
15 Eglin Road, Building 1607  
Hanscom Air Force Base, MA 01731

[bradley.panton@us.af.mil](mailto:bradley.panton@us.af.mil)

**Phone:** 781-225-2695

**Fax:**

**DSN Phone:** 845-2695

**DSN Fax:**

**Date Assigned:** July 1, 2015

## References

**MAIS Original Estimate**

March 9, 2015

**Approved APB**

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated November 14, 2010

## Program Description

In 2009, the Combat Information Transport System program was restructured into two pre-Major Automated Information System (pre-MAIS) components: Information Transport System (ITS) and Air Force Intranet. In 2012, the ITS program was renamed Base Information Transport Infrastructure (BITI) which included the Wired and Wireless components.

BITI Wired provides the core Air Force network infrastructure for 178 fixed Air Force installations and Geographically Separated Units. BITI Wired capabilities encompass optical cable systems, digital voice/data/video systems, and allied support. The end result is high-speed packet switching and circuit transport of critical information among core buildings and mission areas on a base. Additionally, BITI Wireless provides a robust and secure wireless infrastructure that incorporates high-availability and multi-tiered network connections at facilities requiring remote access such as flight lines, hangars, medical facilities, and large storage areas.

The overall BITI program includes two components: Wired and Wireless.

**Wired – Active Duty, Reserve, and Air National Guard:** Base network infrastructure capabilities for fixed Air Force Active Duty installations, Air Force Reserve installations and Air National Guard installations. As of 31 December 2015, all 178 installations are on contract or completed. Of that, eleven (11) installations are active contracts. The program passed its Full Deployment Decision on 11 Dec 2014 (ADM signed 18 Feb 2015).

**Wireless – Second Generation Wireless Local Area Network:** Secure wireless infrastructure that incorporates high-availability and multi-tiered network administration for wireless entry into the base Local Area Network. Full Deployment was achieved in 26 March 2013.

The BITI Wired and Wireless components have merged as part of the Full Development Decision Operations and Support strategy. This would enable the BITI Program (Wired, Wireless, and Air National Guard) to leverage industry advancements and to recapitalize the infrastructure in the most efficient manner by looking agnostically at the method of transport. This MAIS Annual Report reflects the information for the Wired component of the BITI program.

## Business Case

**Business Case Analysis, including the Analysis of Alternatives:** Key functional requirements for this program which were articulated in the Combat Information Transport System Operational Requirements Document; dated January 15, 1998; and re-validated by HQ United States Air Force (USAF)/A5R on October 23, 2008; are summarized as follows:

Information systems and other equipment installations associated with the program face a variety of threats, which are well documented in various threat documents and summarized in this report. The primary tactical threat is information operations, which includes network attack and influence operations, with the aim being to gather information and disrupt service during critical operations.

BITI Wired (Prior known as ITS Inc 1) has been a technology investment program since 1998 doing Air Force upgrades to the network and IT infrastructure area. During the Network Centric Solutions (NETCENTS) I Bid and Proposal process, Then ITS Inc 1 used a "Blue Sky Air Force Base" project to evaluate all of the proposal bids. As a result of the NETCENTS Source Selection, ITS Inc 1 had eight (8) qualified contractors to do the work and Firm Fixed Priced B-Tables were established. Beginning FY 2014, with NETCENTS I expired, contracts shifted to the National Aeronautics and Space Administration Solutions for Enterprise-Wide Procurement (SEWP) Government-Wide Acquisition Contract vehicle focused on IT products and product based services with 37 pre-competed Contract Holders. Firm fixed-price contract tables defined in, and leveraged from, the NETCENTS I contract were carried over and expanded with more detailed breakouts in the BITI contract actions within SEWP. These further breakouts evaluated yearly have led to significant cost savings on the Acquisition phase of this program.

**Firm, Fixed-Price Feasibility:** The determination of the development/integration contract type was based on cost and technical risk associated with satisfying the requirement.

Since the cost and technical risk of satisfying the requirements is sufficiently well understood, the MDA approved the firm, fixed-price contract methodology to execute the program's remaining acquisition phase and further for the O&S Recapitalization phase of BITI.

**Independent Cost Estimate:** An AF Cost Analysis Agency Independent Cost Estimate has been accomplished this period leading to an approved Air Force Service Cost Position in support of the program's December 2014 FDD milestone. The Service Cost Position reflects acquisition cost savings achieved and projected for remaining on-contract projects. It further reflects a detailed look at BITI specific content and other "Service costs" related to, but not discretely contained within the BITI program. The firm, fixed-price contract tables will be carried into this BITI O&S Recapitalization phase and actions are underway to share this construct with other United States Air Force entities.

**Certification of Business Case Alignment; Explanation:** I certify that all technical and business requirements have been reviewed and validated to ensure alignment with the business case. This certification is based on my review of the December 2014 Service Cost Position and FDD packages.

**Business Case Certification:**

Name: Maj Gen Craig Olson

Organization: Air Force/PEO/C3I and Networks for BITI Wired

CAC Subject: CN=OLSON.CRAIG.S.1164906651, OU=USAF, OU=PKI, OU=DoD, O=U.S. Government, C=US

Date: 2/26/2015 01:54 PM

## Business Case Changes

Incorporates latest contract vehicles; continuation of firm-fixed price contract tables into the O&S Recapitalization phase; and notes that an Independent Cost Estimate leading to an Air Force Service Cost Position has been accomplished in support of the program's FDD.

## Program Status

**Annual Report:** The program is substantially on track to remain within the cost, schedule and performance thresholds identified in the Original Estimate; there have been no Significant or Critical Changes (as defined by 10 U.S.C. Chapter 144A) since the previous annual report given to the congressional defense committees.

The program achieved an FDD on February 18, 2015. BITI is fully funded and able to achieve an industry standard five-year recapitalization cycle. In April 2015, BITI awarded contracts for the first phase of the five-year recapitalization cycle representing 49 Air Force and Reserve sites to further the Operations and Support Recapitalization phase of BITI.

## Schedule

Schedule Events		
Events	Original Estimate Objective	Current Estimate (Or Actual)
Funds First Obligated <sup>1</sup>	Jun 2010	Jun 2010
Full Deployment Decision <sup>2, 3</sup>	Dec 2014	Feb 2015
Full Deployment <sup>3</sup>	Sep 2017	Sep 2017

### Memo

1/ Funds First Obligated Date: The funds first obligated date for this schedule is the date the MDA approved the restructuring of the ITS Inc 1 program, June 15, 2010.

2/ The June 6, 2009 CITS restructure ADM, approved by the MDA, defined the ITS Inc 1 program. The MDA directed the program to submit an APB and for the Program Manager to ensure program increments meet the threshold outlined in the APB, with the FDD being the first future milestone. Previous milestones are not required.

3/ Following a briefing on December 11, 2014, an FDD ADM dated February 18, 2015 established the FD date as Sep 2017 (Objective) and Mar 2018 (Threshold).

### Acronyms and Abbreviations

ADM - Acquisition Decision Memorandum  
 CITS - Combat Information Transport System  
 FDD - Full Deployment Decision  
 ITS - Information Transport System  
 MDA - Milestone Decision Authority



## Performance

Performance Characteristics		
Original Estimate Objective/Threshold		Current Estimate (Or Actual)
<b>Reliability</b>		
Mean time between complete loss of transport capability for 30 seconds or more to 90% of systems connected must be 35,000 hours for the digital transmission equipment, 100,000 hours for the networking equipment (e.g. routers, switches, hubs), and 200,000 hours for outside plant equipment.	Mean time between complete loss of transport capability for 30 seconds or more to 90% of systems connected must be 35,000 hours for the digital transmission equipment, 100,000 hours for the networking equipment (e.g. routers, switches, hubs), and 200,000 hours for outside plant equipment.	Will meet Objective
<b>Support</b>		
Site specific and unique support equipment, if required, is to be provided to the site as part of the CITS equipment installation.	Site specific and unique support equipment, if required, is to be provided to the site as part of the CITS equipment installation.	Will meet Objective
<b>Availability</b>		
Redundant features (i.e., dual power supplies and adequate spares).	Redundant features (i.e., dual power supplies and adequate spares).	Will meet Objective
<b>Net-Ready</b>		
Comply with the NR-KPP as defined in CJCSI 6212.01E to include the development of architecture products in compliance with the Global Information Grid (GIG) Architecture, Net-Centric Data/Services, GIG Technical Standards/Interfaces, and Information Assurance measures.	Comply with the NR-KPP as defined in CJCSI 6212.01E to include the development of architecture products in compliance with the Global Information Grid (GIG) Architecture, Net-Centric Data/Services, GIG Technical Standards/Interfaces, and Information Assurance measures.	Will meet Objective

### Memo

The performance characteristics are from the ORD for CITS, AFCA 003-97-I/II/III, dated January 15, 1998.

The use of the ORD was revalidated per memo dated October 23, 2008 from AF/A5R, and during the AFRBs conducted on January 26, 2009 and May 7, 2009.

**Acronyms and Abbreviations**

AF/A5R - Air Force Operations, Plans, and Requirements  
AFCA - Air Force Cost Analysis Agency  
AFRB - Air Force Review Board  
CITS - Combat Information Transport System  
CJCSI - Chairman of the Joint Chief of Staff Instruction  
GIG - Global Information Grid  
NR-KPP - Net Ready-Key Performance Parameters  
ORD - Operational Requirements Document

## Cost

BITI Wired				
Appropriation Category	BY 2010 \$M		TY \$M	
	Original Estimate	Current Estimate Or Actual	Original Estimate	Current Estimate Or Actual
Acquisition Cost				
RDT&E	0.0	0.0	0.0	0.0
Procurement	1431.6	1201.2	1417.7	1178.6
MILCON	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0
Total Acquisition Cost	1431.6	1201.2	1417.7	1178.6
Operating and Support (O&S) Cost				
Total Operating and Support (O&S) Cost	1977.7	921.4	2372.2	1102.4
Total Life-Cycle Cost				
Total Life-Cycle Cost	3409.3	2122.6	3789.9	2281.0

### Cost Notes

1. This report and the Budget Year IT-1 Exhibit cover different time periods thus the costs will not match.
2. Then Year dollars are included for information purposes only; cost variances will be reported against Base Year dollars.
3. The O&S costs reflect all work performed during that phase, regardless of the type or source of funding.
4. Current Estimate based on 2015 Annual Program Office Estimate as of 11 December 2015
5. Cost and funding summary reflects Base Information Transport Infrastructure (BITI) Turnkey Acquisition phase of the program through Full Deployment. All final installations are funded and on contract. Though the program has recognized a cost increase following detailed site surveys of the remaining bases, the program retains greater than 90% of its projected Should Cost goal for the Acquisition phase of the program. Due to unique site specific configurations necessary to meet BITI requirements as discovered during detailed Site Surveys, the program experienced a net increase in cost on these remaining acquisitions.
6. The Annual Funding Detail will not match the P-Docs because the P-Docs incorporate both Acquisition and Operations & Support (O&S) 3080. The Major Automated Information System (MAIS) Annual Report (MAR) only shows Acquisition funding (BITI Turnkey Projects), The BITI Recapitalization values in the MAR are included in the total O&S Costs.